



Healthcare Incident Management Systems

“Making Method Out Of Madness”

Arthur Cooper, MD, MS

Columbia University/Harlem Hospital

NASA, San Antonio, TX, June 7, 2010

Objectives

- At the end of this presentation the participant will have gained an understanding of the:
 - Homeland Security Presidential Directives (HSPD) 5, 8, 18, 21
 - National Incident Management System (NIMS)
 - National Response Framework (NRF)
 - Emergency Support Function (ESF) 8
 - Posse Comitatus Act
 - Stafford Act
 - Hospital Incident Command System (HICS)
 - Training Opportunities and Requirements for Healthcare Incident Management Systems...*Including a Simplified System for Same!*

Homeland Security Presidential Directives

- HSPD-5: *Management of Domestic Incidents*
 - Enhances the ability of the United States to manage domestic incidents by establishing a single, comprehensive national incident management system.
- HSPD-8: *National Preparedness*
 - Identifies steps for improved coordination in response to incidents. This directive describes the way federal departments and agencies will prepare for such a response, including prevention activities during the early stages of a terrorism incident. This directive is a companion to HSPD-5.
- HSPD-18: *Medical Countermeasures Against WMD*
 - Establishes policy guidelines to draw upon the considerable potential of the scientific community in the public and private sectors to address medical countermeasure requirements relating to CBRN threats.
- HSPD-21: *Public Health and Medical Preparedness*
 - Establishes a national strategy that will enable a level of public health and medical preparedness sufficient to address a range of possible disasters.

Homeland Security Presidential Directive 5

Management of Domestic Incidents

- Purpose
 - “(1) To enhance the ability of the United States to manage domestic incidents by establishing a single, comprehensive national incident management system. . . .”
- Policy
 - “(3) To prevent, prepare for, respond do, and recover from terrorist attacks, major disasters, and other emergencies, the United States Government shall establish a single, comprehensive approach to domestic incident management. The objective of the United States Government is to ensure that all levels of government across the Nation have the capability to work efficiently and effectively together, using a national approach to domestic incident management. In these efforts, with regard to domestic incidents, the United States Government treats crisis management and consequence management as a single, integrated function, rather than as two separate functions. . . .”

Homeland Security Presidential Directive 5

Management of Domestic Incidents

- Tasking
 - “(15) The Secretary [of Homeland Security] shall develop, submit for review to the Homeland Security Council, and administer a National Incident Management System (NIMS). The system will provide a consistent nationwide approach for Federal, State, and local governments to work effectively and efficiently together to prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity. To provide for interoperability and compatibility among Federal, State, and local capabilities, the NIMS will include a core set of concepts, principles, terminology, and technologies covering the incident command system; multi-agency coordination systems; unified command; training; identification and management of resources (including systems for classifying types of resources); qualifications and certification; and the collection, tracking, and reporting of incident information and incident resources. . . .”

National Incident Management System

- Command and management
- Preparedness
- Resource management
- Communications and incident management
- Supporting technologies
- Ongoing management and maintenance

National Incident Management System

Command and Management

- Incident Command System (ICS)
 - Defines the operating characteristics, management components, and structure of incident management organizations throughout the life cycle of an incident
- Multiagency Coordination Systems
 - Define the operating characteristics management components, and organizational structure of supporting entities
- Public Information Systems
 - Include the processes, procedures, and systems for communicating timely and accurate information to the public during emergency situations

National Incident Management System

Preparedness

- Planning, training, and exercises
- Personnel qualification and equipment standards
- Equipment acquisition and certification standards
- Publication management processes and activities
- Mutual aid agreements and Emergency Management Assistance Compacts

National Incident Management System

Resource Management

- Descriptions
- Inventory
- Mobilization
- Dispatch
- Tracking
- Recovery

National Incident Management System

Communications and Information Management

- Incident management organizations must ensure that effective, interoperable communications processes, procedures, and systems exist across all agencies and jurisdictions
- Information management systems help ensure that information flows efficiently through a commonly accepted architecture. Effective information management enhances incident management and response by helping to ensure that decisionmaking is better informed

National Incident Management System

Supporting Technologies

- Voice and data communication systems
- Information management systems, such as recordkeeping and resource tracking
- Data display systems
- Specialized technologies that facilitate ongoing operations and incident management activities in situations that call for unique technology-based capabilities

National Incident Management System

Ongoing Maintenance and Management

- NIMS Integration Center
 - Provides strategic direction and oversight in support of routine review and continual refinement of both the system and its components over the long term

National Response Framework

- “The National Response Framework strives to improve coordination among all response partners...through [which we] can work together to help save lives and protect [our] communities.”
 - Engaged partnership
 - Tiered response
 - Scalable, flexible, and adaptable operational capabilities
 - Unity of effort through unified command
 - Readiness to act

National Response Framework

- Engaged partnership
 - *“Engaged partnerships are essential to preparedness. . . .” [Therefore:]*
 - “Leaders at all levels [must] develop shared response goals and align capabilities so that no one is overwhelmed in times of crisis.”

National Response Framework

- Tiered response
 - *“A basic premise of the Framework is that incidents are generally handled at the lowest jurisdictional level possible. . . .” [Therefore:]*
 - “Incidents must be managed [initially] at the lowest possible jurisdictional level and supported by additional capabilities when needed.”

National Response Framework

- Scalable, flexible, and adaptable operational capabilities
 - *“As incidents change in size, scope, and complexity, the response must adapt to meet requirements. . . .” [Therefore:]*
 - “The number, type, and sources of resources must be able to expand rapidly to meet needs associated with a given incident.”

National Response Framework

- Unity of effort through unified command
 - *“Unified command benefits include a collective, strategic approach; joint priorities and resource allocation; single plan and set of objectives; improved information flow and coordination. . . .” [Therefore:]*
 - “Unity of effort respects the chain of command of each participating organization while harnessing seamless coordination across jurisdictions in support of common objectives.”

National Response Framework

- Readiness to act
 - *“Readiness to act is a collective responsibility. Effective national response depends on our readiness to act. . . .” [Therefore:]*
 - “It is our collective duty to provide the best response possible. From individuals, households, and communities to local, tribal, State, and Federal governments, national response depends on our readiness to act.”

National Response Framework Components

- Core Document

- *An Introduction* to the doctrine that guides our national response.
- *Roles and Responsibilities* including who is involved with emergency management activities at the local, tribal, State, and Federal levels and with the private sector and nongovernmental organizations.
- *Response Actions* that describe what we as a Nation collectively do to respond to incidents.
- *Response Organization* specifying how we as a Nation are organized to implement response actions.
- *Planning* requirements to achieve an effective national response to any incident that occurs.

National Response Framework Components

- Annexes

- *Emergency Support Function Annexes* group Federal resources and capabilities into functional areas that are most frequently needed in a national response (e.g., Transportation, Firefighting, Search and Rescue, Mass Care).
- *Support Annexes* describe essential supporting aspects that are common to all incidents (e.g., Financial Management, Volunteer and Donations Management, Private-Sector Coordination). The actions described in the Support Annexes are not limited to particular types of events, but are overarching in nature and applicable to nearly every type of incident. In addition, they may support several ESFs.

National Response Framework Components

- Annexes

- *Incident Annexes* address unique aspects of how we respond to seven broad incident categories (e.g., Biological, Nuclear/Radiological, Cyber, Mass Evacuation). The overarching nature of functions described in these annexes frequently involves either support to or cooperation of all Federal departments and agencies involved in incident management efforts to ensure seamless integration of and transitions between preparedness, prevention, response, recovery, and mitigation activities.
- *Partner Guides* provide ready references describing key roles and actions for local, tribal, State, Federal, and private-sector response partners.

Emergency Support Functions

- Coordination of Federal incident response is accomplished through the ESF framework. ESFs are organized groups of government and private-sector entities that provide personnel, supplies, facilities, and equipment. Each ESF is comprised of:
 - *Primary Agencies*: The National Response Plan identifies primary agencies on the basis of authorities, resources, and capabilities.
 - *Support Agencies*: Support agencies are assigned based on resources and capabilities in a given functional area.
- ESFs may be selectively activated based on the threat, event, or incident. ESF resources may be assigned to serve within any of the response organizations.

Emergency Support Function 8

Public Health and Medical Services

- Purpose
 - “Provides the mechanism for coordinated Federal assistance to supplement State, tribal, and local resources in response to a potential or actual:
 - Public health and medical disaster or emergency (e.g., pandemic flu outbreak, bioterrorism attack).
 - Natural disaster (e.g., hurricane, earthquake, flood).”
 - “Includes behavioral health needs of incident victims and response workers, additional medical response assistance for medical needs populations, and veterinary and/or animal health issues.”

Emergency Support Function 8

Public Health and Medical Services

- Coordinator and Primary Agency
 - Department of Health and Human Services (HHS)
- Support Agencies
 - Numerous Federal agencies serve in a supportive capacity
- Actions
 - Public health and medical needs assessment
 - Public health surveillance
 - Medical care personnel deployment
 - Medical equipment and supplies distribution
 - Patient evacuation and care

Emergency Support Function 8

Public Health and Medical Services

- Other Actions
 - Safety and Security
 - Blood, Organs, and Blood Tissues
 - Behavioral Health Care
 - Public Health and Medical Information
 - Vector Control
 - Public Health Aspects of Potable Water/Wastewater and Solid Waste
 - Mass Fatality Management
 - Veterinary Medical Support

Emergency Support Function 8

Public Health and Medical Services

- Specialized Resources and Capabilities
 - National Disaster Medical System (NDMS)
 - Disaster Medical Assistance Teams (DMATs)
 - Standard
 - Highly specialized (burn, pediatric, crush medicine, international)
 - National Medical Response Teams (NMRTs)
 - Disaster Mortuary Operational Response Teams (DMORTs)
 - Family Assistance Center Teams
 - Mental Health Teams
 - National Veterinary Response Teams (NVRTs)
 - National Nurse Response Teams (NNRTs)
 - National Pharmacy Response Teams (NPRTs)

Emergency Support Function 8

Public Health and Medical Services

- Specialized Resources and Capabilities
 - Strategic National Stockpile (SNS)
 - Public Health Service Commissioned Corps
 - Incident Response Coordination Team (IRCT)
 - Applied Public Health Team (APHT)
 - “Public health department in a box”
 - Mental Health Teams (MHTs)
 - Rapid Deployment Force (RDF)
 - Comprised of Public Health Service Commissioned Corps Officers . . . [whose] capabilities include [provision of public health measure of immediate and critical importance to the health of the public].

Emergency Support Function 8

Public Health and Medical Services

- Concept of Operations
 - “Once a decision has been made to activate ESF 8 assets, staff are alerted and deployed. The initial activities are to:
 - Conduct a risk analysis, evaluate, and determine the capability required to meet the mission objective.
 - Provide required public health and medical support medical assistance to State, tribal, and local medical and public health officials.”

Emergency Support Function 8

Public Health and Medical Services

- However:
 - “Any request for Federal assistance must follow upon a Presidential disaster declaration, in accordance with the provisions of the Stafford Act, since unilateral Federal action in a State is prohibited by the Posse Comitatus Act. This can only be made upon request of the Governor(s) of the involved State(s).
 - Before requesting Federal aid, the Governor(s) of the involved State(s) must already have made a disaster declaration
 - The President can then direct the Secretary of Health and Human Services to activate ESF 8. Under the Pandemic and All Hazards Preparedness Act (PAHPA), [ESF 8] is the responsibility of the Assistant Secretary for Preparedness and Response (ASPR).”

Posse Comitatus

- Latin for “power of the county”
- Refers in common law to the power of a county sheriff to call upon all males over the age of fifteen for assistance in preventing any type of civil disorder
- Has its roots in ancient English law
- Grew out of the citizen’s traditional duty to raise a “hue and cry” whenever a serious crime was committed in a village, thereby arousing villagers to assist in pursuing the criminal

Posse Comitatus Act

- 18 USC § 1385 (enacted 1878, amended 1956)
 - “Whoever, except in cases and under circumstances expressly authorized by the Constitution or Act of Congress, willfully uses any part of the Army or the Air Force as a posse comitatus or otherwise to execute the laws shall be fined under this title or imprisoned not more than two years, or both.”
- 10 USC § 375 (related provision, military law)
 - “The Secretary of Defense shall prescribe such regulations as may be necessary to ensure that any activity (including the provision of any equipment or facility or the assignment or detail of any personnel) under this chapter does not include or permit direct participation by a member of the Army, Navy, Air Force, or Marine Corps in a search, seizure, arrest, or other similar activity unless participation in such activity by such member is otherwise authorized by law.”

Stafford Act

- The Robert T. Stafford Disaster Relief and Emergency Assistance Act, P.L. 93-288 of 1988, as amended, 42 U.S.C. §§ 5121-5206, and implementing regulations in 44 C.F.R. §§ 206.31-206.48, provide the statutory framework for a Presidential declaration of an emergency or a declaration of a major disaster.
- Such declarations open the way for a wide range of federal resources to be made available to assist in dealing with the emergency or major disaster involved.
- The Stafford Act structure for the declaration process reflects the fact that federal resources under this act supplement state and local resources for disaster relief and recovery.
- Except in the case of an emergency involving a subject area that is exclusively or preeminently in the federal purview, the Governor of an affected state, or Acting Governor if the Governor is not available, must request such a declaration by the President.

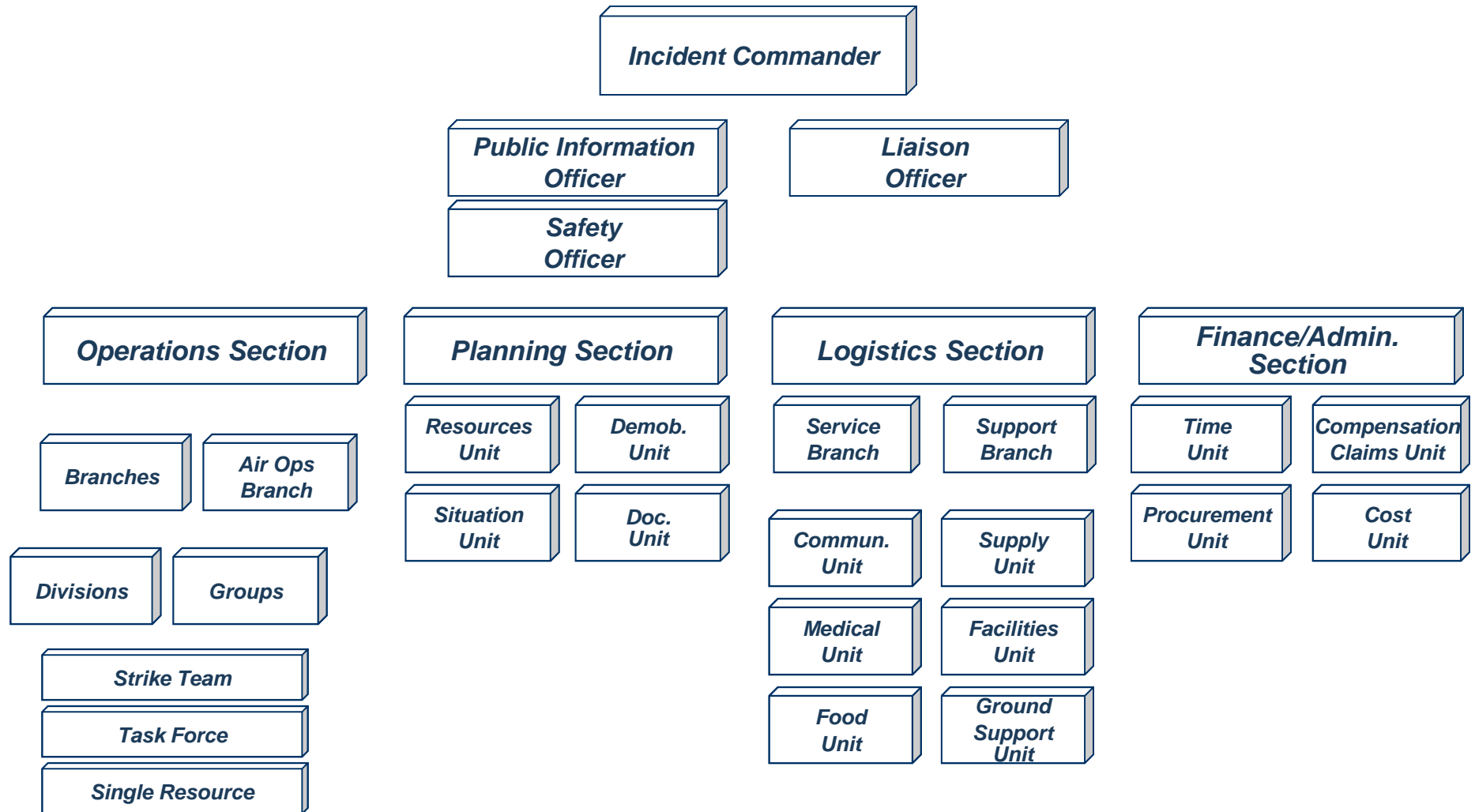
Stafford Act

- § 5170. Procedure for declaration
 - “All requests for a declaration by the President that a major disaster exists shall be made by the Governor of the affected State. Such a request shall be based on a finding that the disaster is of such severity and magnitude that effective response is beyond the capabilities of the State and the affected local governments and that Federal assistance is necessary. As part of such request, and as a prerequisite to major disaster assistance under this chapter, the Governor shall take appropriate response action under State law and direct execution of the State’s emergency plan. . . . Based on the request of a Governor under this section, the President may declare under this chapter that a major disaster or emergency exists.”

Incident Command Systems

- *Common terminology*, including use of “clear text” in lieu of agency-specific codes.
- *Organizational resources*, including use of common definitions for resource type.
- *Organizational facilities*, including use of common terminology for similar facilities.
- *Manageable span of control*, to ensure that all incident responders act in unison.
- *Use of position titles*, to reduce confusion between day-to-day and disaster positions.
- *Reliance on an Incident Action Plan*, to effectively communicate disaster objectives.
- *Integrated communications*, to ensure that information is accurately transmitted.
- *Accountability*, to ensure that all personnel act as a part of the incident response.

[Hospital] Incident Command System



[Hospital] Incident Command System

Incident Commander (IC):
*Develops incident objectives.
Ensures Safety Analysis is
completed. Approves IAP.*

*Incident
Commander*

Command Staff: *Assists IC
with public information,
liaison with other agencies,
and safety of responders.*

*Operations
Section*

*Planning
Section*

*Logistics
Section*

*Finance/Admin
Section*

Operations:
*Establishes
strategies and
tactics to meet
incident
objectives.*

Planning:
*Provides status
reports,
manages the
planning
process, and
produces the
IAP.*

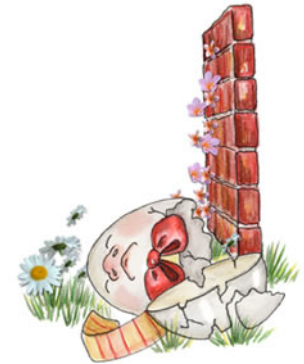
Logistics:
*Identifies the
logistics
requirements
to support the
tactics.*

Finance/Admin:
*Conducts any
needed cost-
analyses.*

Healthcare Management Program for the Training of Employees (**HMPTE**): Disaster Management Plan for Troublesome Events (**DMPTE**)



*A Novel Training Program In
Disaster Management And
Emergency Preparedness For The
Healthcare Incident Management Team*



Brought To You By The
American Academy of Disaster Medicine
Also Known As
All the King's Horses and All the King's Men

National Disaster Definitions

- **NIMS** – **N**ational **I**ncident **M**anagement **S**ystem
 - *ICS 700 - We're all part of it!*
- **NRF** – **N**ational **R**esponse **F**ramework
 - *ICS 800.B - We're all working within it!*
- **HICS** – **H**ospital **I**ncident **C**ommand **S**ystem*
 - *ICS 100.HC (Introduction), ICS 200.HC (Basic)*
- **MCI** – **M**ultiple **C**asualty **I**ncident (challenges but does not overwhelm hospital medical resources)
 - *Typically involves **five (5)** or more patients*
- **MCE** – **M**ass **C**asualty **E**vent (overwhelms both local hospital and regional healthcare resources)
 - *Typically involves **twenty (20)** or more patients*

*Abbreviated from **HIC[CUP]S** – **H**ospital **I**ncident **C**ommand **C**onfuses **U**ntrained **P**ersonnel and **S**upervisors

Healthcare Disaster Definitions

- **HIMS** – Healthcare Incident **M**anagement **S**ystem
 - *Addresses all hazards, but emphasizes HVA*
- **HERS** – Healthcare **E**mergency **R**esponse **S**trategy
 - *“**RACE**” (fire), “**SPIN**” (others), “**CARE**” (both)*
- **HICS** – Healthcare Incident **C**ommand **S**tructure
 - *Mount “**OLMPS**” and “**C-FLOP**”*
- **MCI** – A typical Saturday evening in a busy Level I Trauma Center or Emergency Department!
 - *Typically involves **five (5)** or more patients*
- **MCE** – An atypical Saturday morning in a normally busy Emergency Department during H1N1!
 - *Typically involves **twenty (20)** or more patients*

NIMS Or HIMS?

NIMS (US DHS)

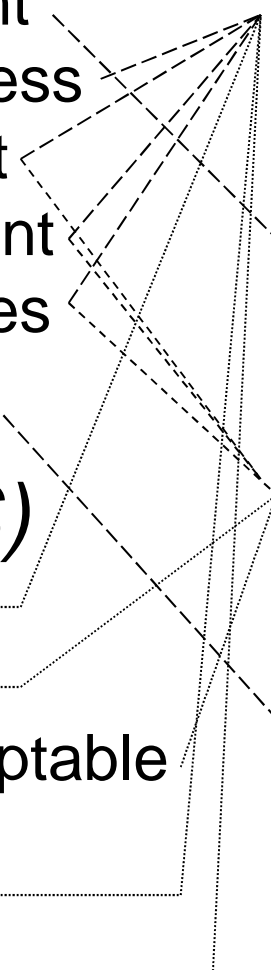
- Command/Management
- Emergency Preparedness
- Resource Management
- Information Management
- Supporting Technologies
- Ongoing Management

NRF (US DHS)

- Engaged Partnership
- Tiered Response
- Scalable, Flexible, Adaptable Operational Guidelines
- Unity Of Effort
- Readiness To Act

HIMS (UN WHO)

- Preparation (Ready?)
 - *Simple Plan*
 - *Educate All*
- Mitigation (Set?)
 - *Incident Command*
 - *Frequent Exercises*
- Response (Go!)
 - *Triage Scheme*
 - *Surge Capability*
- Recovery (Slow...)
 - *Keep Operating*
 - *Routine Services, Disaster Services*

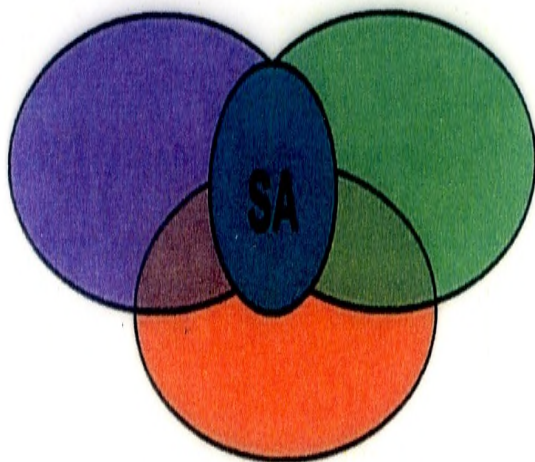


When To “Turn On” The HIMS

Situational Awareness*

What **HAS**
Happened

What's **NOW**
Happening?



What **MAY**
Happen

“SBAR”

- **Situation**
 - What's **NOW** Happening?
- **Background**
 - What **HAS** Happened
- **Assessment**
 - What **MAY** Happen
- **Response**
 - What **SHOULD** Happen!

*Just like the subway – “**S-4**”: If you **SEE SOMETHING, SAY SOMETHING!**

How To “Turn On” The HIMS

Fire

“RACE From The Place!”

- **Rescue**
- **Alarm**
- **Contain**
- **Evacuate**

“CBRNE”*

“SPIN - Save Your Skin!”

- **Safety**
- **Protection**
- **Isolation**
- **Notification**

****CBRNE = Chemical, Biological, Radiological, Natural, Explosive***

“SPIN - Save Our Skin!”

Safety

- Our **Selves**
 - *Be **part** of the **solution***
- Our **Coworkers**
 - *Keep them **out** of **danger***
- Our **Visitors**
 - *Get them **away** from **site***

Protection

- Our **Staff**
 - ***PPE** (when indicated)*
- Our **Facility**
 - *Call hospital **police***
- Our **Patients**
 - ***Evacuate** as necessary*

Isolation

- **Internal Disaster**
 - ***Containment***
- **External Disaster**
 - ***Lockdown***
- **Decontamination**
 - ***Quarantine***

Notification

- **“Powers That Be”**
 - ***AOD** (declares disaster)*
- **Public Agencies**
 - ***Liaison** officer*
- **Press/media**
 - ***Public** information officer*

How To “Turn On” The **HERS**

“Talk The Talk”

- Unity of command
 - *Span of control*
- Unidirectional flow
 - *Information*
 - *Patients*
 - *Supplies*
- Universal communix
 - *Formal/informal*
 - *Redundant*
 - *Responsible*
 - *“SBAR”*
- ***Universal precautions!***

“Walk The Walk”

- Keep eye on the ball
 - *Listen to the coach*
- Don't hit for the fence
 - *Just meet the ball*
 - *Check your swing*
 - *Play your position*
- Follow through
 - *It takes a team*
 - *Get the job done*
 - *Back up other players*
 - *Correct your mistakes*
- ***Practice makes perfect!***

“DARE To CARE!”

- **C – Cease** nonacute patient care activity
 - *Delay elective operations, procedures, infusions*
- **A – Activate** unit specific disaster plan
 - *Assign caretaker staff, reassign others*
- **R – Report** to assigned work station
 - *Review assignment, job action sheet*
- **E – Ensure** your own, others' safety
 - *Employ PPE appropriate to assignment*

How To “Turn On” The HICS

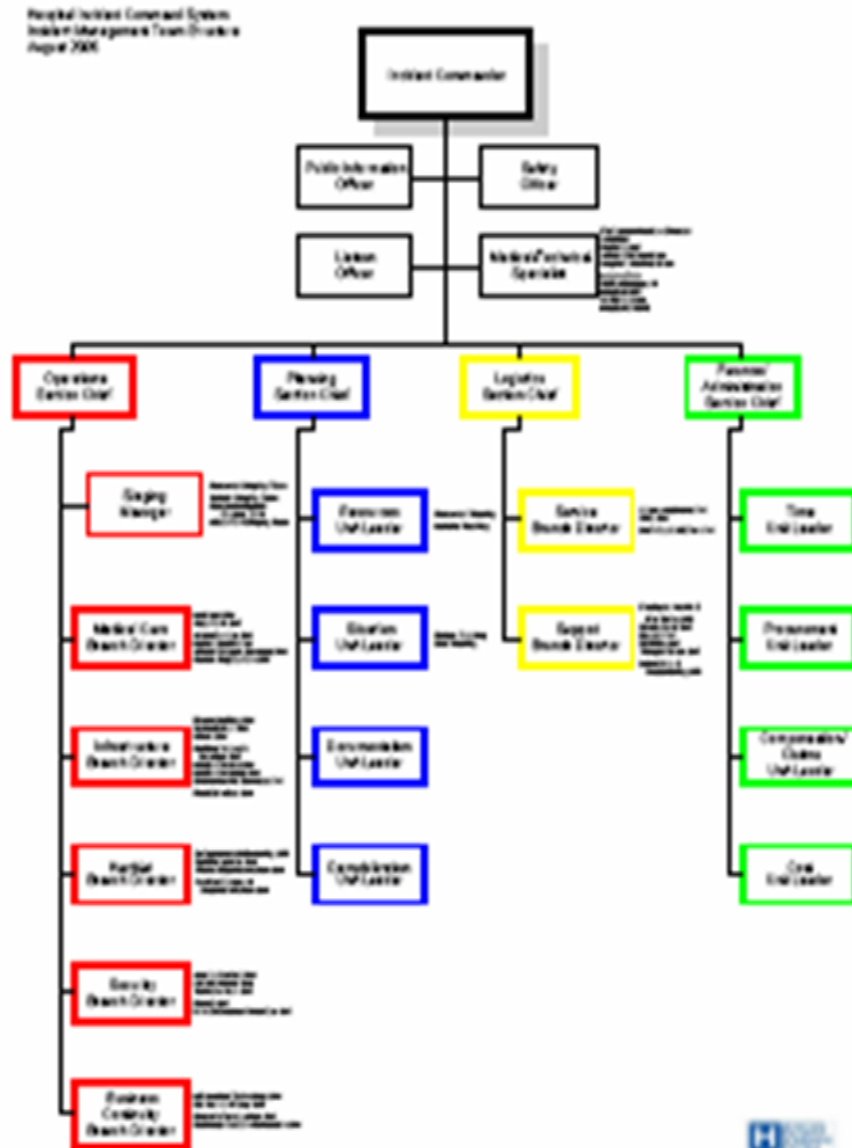
National Approach

- “Opus complexicus”
- An overly detailed, and somewhat confusing, Table of Organization; no one can see it from the back of the room!
- “Separate” from usual Table of Organization
 - *Advantage:* designated staff know their roles
 - *Disadvantage:* **who** is **really** giving the orders?

“Healthy” Approach

- “KISS” principle
- It’s run from the top of Mount “OLMPS”; yet without it we will “C” our disaster response completely “FLOP”!
- Closely follows normal Table of Organization
 - *Advantage:* expansion of normal daily routines
 - *Disadvantage:* **all** staff **must** know their roles

National Approach



“Healthy” Approach

- **HIMS**
 - **S-4** And **SBAR**
 - **RACE** Or **SPIN?**
- **HERS**
 - **Talk And Walk!**
 - **DARE To CARE!**
- **HICS**
 - Mount **OLMPS**
 - **C-FLOP**

“You Know The Drill...”

Don’t Wait For The Date...

The Date Is Too Late!

Mount “**OLMPS**” and “**C-FLOP**”

Positions and Purposes People and Places

- Incident Command
 - *Staff **O**fficers*
 - **L**iaison (other agencies)
 - **M**edical Advisor (E&DM)
 - **P**ublic Information (press)
 - **S**afety (staff, patients)
 - *Line **C**hiefs*
 - **F**inance (push the paper)
 - **L**ogistics (get the stuff)
 - **O**perations (do the job)*
 - **P**lanning (get the staff)
- Incident Managers
 - *Command Center (CC)*
 - “Dealers”
 - “Professors”
 - “Talkers”
 - “Protectors”
 - *Chiefs: CC; Others: Site*
 - “Payers”
 - “Getters”
 - “Doers”
 - “Thinkers”